

REMARKS

This application has been reviewed in light of the Office Action mailed October 2, 2003. Claims 1-12 are pending in this case. Claims 1 and 10 are amended to specify that the inventive apparatus allows a test current to pass directly through the conductive pins to the circuit assembly being tested without passing through the compliant pressure pins. The amendments are intended to clarify the implicit limits of the claims and not to narrow the scope of these claims. It is believed that amended independent Claims 1 and 10 are now in a condition of allowance. Further, Claims 2-9 and 11-12, dependent on amended independent Claims 1 and 10, are allowable for at least the same reasons as Claims 1 and 10.

I. THE 35 U.S.C. §102(b) REJECTION AS ANTICIPATED BY PROKOPP

Claims 1-3, 5-7 and 10-12 were rejected pursuant to 35 U.S.C. §102(b) as anticipated by U.S. Patent Number 4,926,119 to Prokopp ("Prokopp"). The Office Action alleges that Prokopp anticipates Applicants' apparatus for testing a circuit assembly. (Office Action, page 2, paragraph 2).

For a reference to anticipate under §102(b), it must contain each and every element of the claimed invention. Advance Display Sys. v. Kent State Univ., 212 F.3d 1272 (Fed. Cir. 2000). The current invention discloses an apparatus having pressure pins which are isolated from the electrical connection. (Specification, page 3). Advantageously, a test current does not pass through the compliant pressure pins or the resilient compression element. Since the pressure pins are not a part of the electrical test circuit, they may be adapted according to optimal

mechanical properties alone. (Specification, page 4). For example, the pressure pins can include a stronger resilient compression element to achieve a higher contact force, without an increase in the contact resistance. (Specification, page 4). Additionally, this improvement eliminates the problems associated with the annealing and deterioration of the compliant pressure pins and resilient compression element caused by continual application of electrical stresses. (Specification, page 3). Claim 1, as amended, claims an apparatus which allows "a test current to pass directly through said conductive pins without passing through said compliant pressure pins." (See amended Claim 1).

Prokopp fails to disclose an apparatus which permits passage of a test current directly through conductive pins to the circuit board to be tested without passing through the compliant pins. Instead, Prokopp describes a contact device wherein the countercontact pins (22) and the contact needles (12) are aligned in series with respect to the test current source such that an applied test current must travel through both the countercontact pins (22) and the contact needles (12). (Prokopp, Figure 1). Thus Prokopp, for at least these reasons, does not anticipate independent Claim 1. Further, Claims 2, 3, 5-7, dependent on amended Claim 1, are also in a condition of allowance. Accordingly, the Examiner is respectfully asked to withdraw the §102(b) rejection of independent Claim 1, and dependent Claims 2, 3, and 5-7.

With respect to Claims 10-12, the Examiner alleges that the method described therein is the inherent method of using the apparatus of Prokopp. (Office Action, page 3, paragraph 2). This contention is respectfully traversed. Claim 10, as amended, claims a method in which a test

current is applied to "the circuit assembly directly through the conductive test pins without passing through the compliant pressure pins." (See amended Claim 10) (emphasis added).

In contrast, using the apparatus of Prokopp results in passage of current through both the pressure and conductive pins. Prokopp describes "the relevant electrical connections being formed through the contact needles and the respective countercontact elements to which the conductors of the test circuit may be connected in the usual manner." (Prokopp, col. 8, lines 55-59) (emphasis added). Thus, Prokopp does not anticipate Claim 10 because the method disclosed in Claim 10 does not result from using the apparatus of Prokopp. Accordingly, Claims 11 and 12, as dependent on amended Claim 10, are allowable for at least the same reasons as Claim 10.

II. THE 35 U.S.C. §103(a) REJECTION OF CLAIMS 8 AND 9

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as unpatentable over Prokopp. It is well established that to establish a *prima facie* case of obviousness, it must be shown that the reference teaches or suggests *all* the limitations of the claimed invention. MPEP 2143 (emphasis added). As discussed above, Prokopp fails to teach or suggest a limitation of independent Claim 1, namely the passage of a test current directly through the conductive pins without passing through the compliant pins. In the Applicants' view, Prokopp fails to teach or suggest this limitation of Claims 8 and 9. For at least this reason, Claims 8 and 9 are nonobvious over Prokopp. Since each dependent claim is also deemed to define an additional aspect of the invention, individual reconsideration of the patentability of each claim on its own merits is

respectfully requested. Accordingly, Applicants respectfully request withdrawal of the §103 rejection of Claims 8 and 9.

III. THE 35 U.S.C. §103(a) REJECTION OF CLAIM 4

Claim 4 stands rejected under 35 U.S.C. §103(a) over Prokopp in view of U.S. Patent Number 4,267,506, to Shiell ("Shiell"). The Examiner suggests that element (10), referred to in Shiell as a resistivity probe, is a pressure pin. (Office Action, page 4, paragraph 6). Further, the Examiner goes on to propose using the compression element disposed within the resistivity probe in place of the compression element disclosed in Prokopp. (Office Action, page 5, paragraph 6). However, the resistivity probe disclosed in Shiell is not a pressure pin. A comparison of the physical structure and functionality of the probe and the Applicants' pressure pin suggests this distinction.

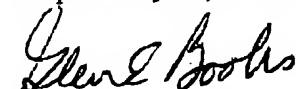
In the current application, a compliant pressure pin applies pressure to a circuit assembly thereby holding the circuit assembly against the corresponding contact surfaces of a conductive pin. (Specification, page 5). In contrast, the resistivity probe described in Shiell does not apply pressure. In Shiell, the semiconductor wafer to be measured is brought into contact with electrically conducting pins (22) by lowering a housing (32) to which the probe is mounted. (Shiell, col. 4, lines 6-8). In operation, the probe (10) does not apply pressure to maintain or bring a circuit assembly in contact with conductive pins. Since the probe fails to apply pressure, it follows that the probe is fundamentally different from both the pressure pin disclosed in the current application and the countercontact pin set forth in Prokopp.

Since the resistivity probe in Shiell is not comparable to the pressure pin in Prokopp, Applicants submit that there is no suggestion or motivation for one having ordinary skill in the art to use the compression element in the probe in place of the compression element in the countercontact element in Prokopp. Accordingly, Applicants respectfully request withdrawal of the §103 rejection of Claim 4.

III. CONCLUSION

In view of the foregoing, Claims 1-12 are submitted to be allowable. Reconsideration and favorable action in this regard are therefore earnestly solicited.

Respectfully submitted,



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